AVITAL®

Model 3100L

➤Owner s Guide

Limited Lifetime Consumer Warranty

For a period of one calendar year from the date of purchase of this auto-security device, Directed Electronics, Inc. promises to the ORIGINAL PURCHASER to repair or replace (with a comparable reconditioned model), free of cost, any electronic control module which proves to be defective in workmanship or material under normal use, SO LONG AS THE SYSTEM WAS SOLD, INSTALLED, AND SERVICED BY A PROFESSIONAL AUTO INSTALLER, AND REMAINS IN THE CAR IN WHICH THE SYSTEM WAS ORIGINALLY INSTALLED. If warranty service is necessary you must have a clear copy of your sales receipt containing all of the information shown on the following page.

After the first calendar year, from the date of purchase of this auto-security device, Directed Electronics, Inc., promises to the ORIGINAL PURCHASER to repair or replace (with a comparable reconditioned model) any electronic control module which proves to be defective in workmanship or material under normal use **FOR A CHARGE OF $45.00,** SO LONG AS THE SYSTEM WAS SOLD, INSTALLED, AND SERVICED BY A PROFESSIONAL AUTO INSTALLER, AND REMAINS IN THE CAR IN WHICH THE SYSTEM WAS ORIGINALLY INSTALLED. If warranty service is necessary you must have a clear copy of your sales receipt containing all of the information shown on the following page.

This warranty contains the entire agreement relating to warranty and supersedes all previous and contemporaneous representations or understandings, whether written or oral. IN ANY EVENT, DEI IS NOT LIABLE FOR THE THEFT OF THE VEHICLE AND/OR ITS CONTENTS.

This warranty is void if the product has been damaged by accident, unreasonable use, neglect, improper service or other causes not arising out of defects in materials or construction. This warranty is nontransferable and does not apply to any unit that has been modified or used in a manner contrary to its intended purpose and does not cover batteries. The unit in question must be returned to the manufacturer, postage prepaid. This warranty does not cover labor costs for the removal, diagnosis, troubleshooting or reinstallation of the unit. For service on an out-of-warranty product a flat rate fee by model is charged. Contact your authorized dealer to obtain the service charge for your unit.

These systems are a deterrent against possible theft. Directed Electronics, Inc. is not offering a guarantee or insuring against the theft of the automobile or its contents and disclaims any liability for the theft of the vehicle and/or its contents. Directed Electronics does not authorize any person to create for it any other obligation or liability in connection with this security system.

TO THE MAXIMUM EXTENT ALLOWED BY LAW, ANY AND ALL WARRANTIES ARE EXCLUDED BY THE MANUFACTURER AND EACH ENTITY PARTICIPATING IN THE STREAM OF COMMERCE THEREWITH. THIS EXCLUSION INCLUDES BUT IS NOT LIMITED TO THE EXCLUSION OF ANY AND ALL WARRANTY OF MERCHANTABILITY AND/OR ANY AND ALL WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND/OR ANY AND ALL WARRANTY OF NON-INFRINGEMENT OF PATENTS, IN THE UNITED STATES OF AMERICA AND/OR ABROAD. NEITHER THE MANUFACTURER OR ANY ENTITIES CONNECTED THEREWITH SHALL BE RESPONSIBLE OR LIABLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, TOWING, REPAIR, REPLACEMENT, DAMAGES FOR LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR REPAIR THE CONTROL MODULE AS DESCRIBED ABOVE. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

$2,500 Limited Theft Protection Guarantee

Terms and Conditions. Available only in the USA. In the event that your vehicle is stolen and not recovered, Directed Electronics, Inc. will refund to the original purchaser of the Avital system up to $2,500 of your insurance deductible. This vehicle protection guarantee is valid only if:

(1) The installation was performed by an authorized Avital dealer.
(2) The warranty registration card is completed and mailed within ten (10) days of purchase.
(3) At the time of the theft, the system was fully functional and not in “valet mode.”
(4) The vehicle and its contents were insured at the time of the theft.
(5) The insurance company and the police have been notified and a written stolen vehicle report was issued by the Police Department.
(6) No less than thirty (30) days ***after*** the police report was issued, you mail Directed Electronics, Inc. clear photocopies of the following documents:

  a. Proof of Purchase OR provide the system model and name of the company that installed the system.
  b. The stolen vehicle report issued by the police.
  c. Insurance coverage documents for the stolen vehicle, clearly showing all the details, including the vehicle identification number and the insurance deductible amount.
  d. A dated declaration signed by you the owner of the vehicle, attesting that the vehicle has been stolen for more than thirty (30) days and has not been recovered.

This vehicle theft protection is effective for one (1) year from the date of purchase and is limited to one claim. This vehicle theft protection guarantee is valid only for the theft of the entire vehicle and specifically excludes any other considerations, including, but not limited to, damage caused to the vehicle, theft of parts, contents or any other consequential damages. Once Avital Technologies verifies that all the above listed terms and conditions have been met, a check for the insurance deductible (up to $2,500) will be mailed within thirty (30) days.

Make sure you have all of the following information from your dealer:

A clear copy of the sales receipt, showing the following:

- Date of purchase
- Your full name and address
- Authorized dealer's company name and address
- Type of alarm installed
- Year, make, model and color of the automobile
- Automobile license number
- Vehicle identification number
- All security options installed on automobile
- Installation receipts

Table of Contents

What is Included

- A control module
- Two 3-button remote transmitters
- A zone 2 impact sensor on-board the control module
- A high-powered siren
- A fault-proof starter interrupt on-board the control module
- An LED system status indicator
- A push-button Valet® switch

Important Information

Congratulations on the purchase of your state-of-the-art vehicle security system. This system has been designed to provide years of trouble-free operation. By carefully reading this guide prior to using your system, you will maximize the use of this product and its features.

System Maintenance

Your vehicle security system has no specific maintenance requirements. The remote transmitter is powered by a lightweight 3-volt lithium battery that will last approximately one year under normal use. When the battery begins to weaken, the LED on the remote transmitter will dim and you will notice reduced operating range

when using the remote transmitter. To access the battery for replacement, remove the rear cover of the remote with a small, flat-blade screwdriver.

Your Warranty

Your warranty card must be returned and the barcode serial number must not be removed. If the warranty card is not returned, no warranty will be honored on your unit. It is also necessary to keep your proof of purchase, which reflects that the product was installed by an authorized dealer. Make sure you receive the warranty card from your dealer.

FCC/ID Notice

This device complies with Part 15 of FCC rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

Remote Functions

This system is programmable, making it possible to assign any remote button to any specific receiver function. The remote initially comes programmed with Standard Configuration, but may also be customized by an authorized dealer. The buttons in all of the instructions in this manual correspond to a Standard Configuration remote.

Standard Configuration

Button

The arm/disarm/panic functions are usually controlled by .

Button

An optional accessory function (such as trunk release), remote-controlled silent arm/disarm, and remote-controlled Valet® are usually controlled by . (Silent arm/disarm and remote-controlled Valet work by pressing for less than one second. An optional accessory can be controlled by pressing and holding for 1.5 seconds.)

This accessory output controls ________________________________.

Button

A user-assigned convenience or expansion option that you have added to your system can be activated by pressing .

This accessory output controls_________________________________.

Using Your System

The remote buttons indicated in this manual correspond to a standard configuration remote, unless otherwise specified.

Arming

You can arm the security system by pressing  for one second. When the system arms, you will hear a short siren sound (chirp) and the parking lights will flash once. If the power door locks are controlled by the system, the doors will also lock. Once armed, the LED system status indicator will flash once per second to indicate that the system is actively protecting your vehicle. If you hear a second chirp after arming and notice that the LED system status indicator is flashing in a grouped pattern, this signals Bypass Notification. Bypass Notification is described in detail in the Diagnostics section of this manual.

Your security system can also be programmed for Passive Arming. With Passive Arming, the system automatically arms itself 30 seconds after the ignition has been turned off and the last door has been closed. During the 30-second Passive Arming countdown, the LED system status indicator will flash twice as fast as it does when the system is armed. If the system is programmed for Passive Arming, care must be taken to prevent the keys from being locked in the vehicle.

> **NOTE:** If any protected entry point, such as a door or switch-protected trunk or hood, is open, Passive Arming will not engage. Additionally, each

time a sensor is triggered during the Passive Arming countdown, the countdown starts over.

Arming your security system protects your vehicle to the following degrees:

- Light impacts trigger a **warn-away** response, causing the siren to chirp and the parking lights to flash for a few seconds.
- Heavy impacts trip a **trigger sequence**, which consists of the siren sounding continuously and the parking lights flashing for 30 seconds.
- If a door is opened, the siren immediately starts chirping and the parking lights start flashing to provide an instant response. Three seconds later, the siren output changes to a continuous blast. This two-stage **progressive response** allows you time to disarm the security system with your remote, in case the door is inadvertently opened while the system is armed.
- Turning on the ignition key triggers the same two-stage progressive response as opening a door.
- The fault-proof starter interrupt prevents the vehicle's starter from cranking.

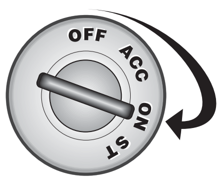
Disarming

Press to disarm the security system when it is already armed. If the power locks are controlled by the system, the doors will also unlock. Disarming is confirmed when the parking lights flash twice and the siren emits two chirps. The LED system status indicator will also stop flashing. The siren chirping either four or five times when

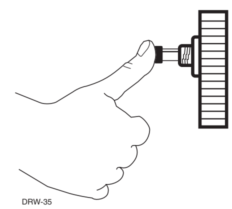
disarming indicates Tamper Alert, which is described in the Diagnostics section of this guide.

Disarming Without a Remote

If your remote is lost or damaged, you can manually disarm your vehicle security system. To disarm the system without a remote, you must have the vehicle's ignition key and know where the Valet switch is located. Be sure to check with your installer at the time of installation for the location of the Valet switch.



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To disarm the security system, turn the ignition key on and press the Valet switch within 15 seconds. The system should now disarm. If the system does not disarm, you may have waited too long to press the Valet switch; turn the ignition off and repeat the process.

Location of Valet Switch______________________________

Panic Mode

If you are threatened in or near your vehicle, you can press for 1.5 seconds to trigger Panic Mode on your security system and attract attention. The siren will sound and the parking lights will flash for 30 seconds. To stop the Panic Mode at any time, press again.

Remote-Controlled Silent Arm/Disarm

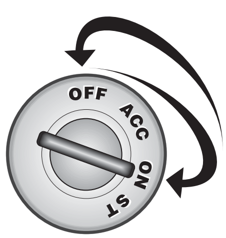
Use remote-controlled silent arm/disarm to temporarily turn off the arm or disarm chirps by briefly pressing  before either arming or disarming. The confirmation chirp(s) will then be eliminated for that one operation only. To permanently turn off the arm and disarm chirps, contact your installation dealer.

> **NOTE:** The warn-away response to lighter impacts is bypassed if the system is armed using remote-controlled silent arm/disarm. This ensures that the siren does not chirp in an environment where you do not want chirps to be emitted. The system is still capable of being triggered by heavier impacts; only the warn-away response generated by light impacts is bypassed.

Valet Mode

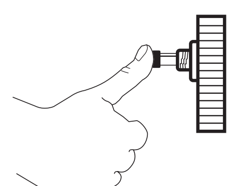
Valet Mode prevents your security system from arming and triggering either automatically or with the remote. In Valet Mode, the system will not arm, but all convenience functions (door locks, trunk release, etc.) remain operational. This feature is useful when washing or servicing your vehicle. You can access Valet Mode either manually or from the remote.

To enter or exit Valet Mode with the Valet switch:



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1. Turn the ignition on.
2. Turn the ignition off.
3. Press and release the Valet switch within 10 seconds.


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The LED system status indicator will light solidly if you are entering Valet Mode and will turn off if you are exiting Valet Mode.

Remote-Controlled Valet

You can also enter or exit Valet Mode by using the remote:

1. Open any vehicle door.
2. Press .
3. Press .
4. Press  again.

The LED system status indicator will light solidly if you have entered Valet Mode and will turn off if you have exited Valet Mode.

Nuisance Prevention® Circuitry

Your security system has Nuisance Prevention Circuitry™ (NPC™) to prevent annoying false alarms. This circuitry is designed to prevent repetitive trigger sequences due to faulty door pinswitches or environmental conditions such as thunder, jackhammers, airport noise, etc.

Here's how it works: If the alarm is triggered by the same sensor or switch three times within a 60 minute period, your system interprets this pattern of triggers as false alarms. After the third trigger, the NPC™ ignores, or bypasses, that sensor or switch (along with any other sensors or switches sharing the same zone) for 60 minutes. If the bypassed sensor is triggered again while it is already being bypassed, the 60-minute bypass period will start over. This ensures that a sensor that is continually being triggered will remain bypassed.

The vehicle doors are protected differently by NPC™. If your secu-

rity system is triggered by an open door for three, full 30-second cycles (one and one half minutes), the system will bypass the doors until the trigger ceases.

NOTE: Arming and disarming the system does not reset the NPC™. The only ways to reset a bypassed zone are for that zone not to be triggered for 60 minutes or to turn the ignition key on. When testing your system, it is important to remember that NPC™ can cause zones to be bypassed and appear to not work. If five chirps are heard when disarming the system, NPC™ has been engaged. To clear the NPC™ memory, simply turn the ignition key on.

[Diagnostics]

The microprocessor at the heart of your system has the ability to constantly monitor all of the switches and sensors connected to it. It can detect any faulty switches or sensors and prevent them from disabling the entire system. It can also record and report any triggers that occur when you are away from your vehicle.

Arming Diagnostics

If the system is armed at the same time that an input is active (door opening, sensor triggering, etc.), you will hear one chirp to indicate arming and a second chirp a few seconds later to indicate Bypass Notification. A Bypass Notification chirp means that the system ignores the input that was active when the system was armed, until that input ceases. Three seconds after that input ceases, the system will resume normal monitoring. For example, if

your vehicle has an interior light exit delay and you arm the system before the light turns off, you may hear a Bypass Notification chirp. Three seconds after the light turns off, however, normal monitoring resumes.

NOTE: Bypass Notification does not occur when the system is in remote-controlled silent arm/disarm mode or if the chirps have been programmed not to sound.

Disarming Diagnostics

Your system has a Tamper Alert feature that notifies you of system triggers that occur while you are away from your vehicle. If you hear four chirps when you disarm, this indicates that the system was triggered in your absence. If you hear five chirps when you disarm, this indicates that a specific zone was triggered so many times that the NPC™ has bypassed that zone. In both cases, the pattern of the flashing LED system status indicator indicates which zone was triggered (see Table of Zones). The LED does not, however, report when warn-away responses have activated; it only reports triggered sequences. The system retains this information in its memory and will continue to chirp four or five times each time the system is disarmed, until the next time the ignition is turned on.

Table of Zones

A zone is represented by the number of LED flashes used by the system to identify a particular type of input. Standard input assignments are listed in the following table, along with spaces to write in any optional sensors or switches that you have had installed.

ZONE (Number of LED Flashes)	**DESCRIPTION**	**DEALER-INSTALLED OPTIONS**
1	Instant trigger for optional sensor, hood or trunk pins	
2	A heavier impact detected by the on-board impact sensor	
3	Door switch trigger	
5	Ignition trigger	

NOTE: The LED does not report when the warn-away response has been activated; it only reports triggered sequences.

Code Hopping Technology

The receiver and remote use mathematical formulas called algorithms to change their codes each time the remote is used. This Code Hopping Technology has been developed to increase the security of the unit. By following this set code sequence, the receiver and remote stay synchronized, even if the remote is used out of range of the vehicle. If, however, the remote is pressed many times out of range, or the battery is removed, the remote may get temporarily out of sync and fail to operate the system. To resynchronize the remote, simply press  several times within range of the vehicle. The system will automatically resynchronize and the remote will respond normally.

High Frequency

Your system transmits and receives at 434 MHz. This provides a cleaner spectrum with less interference and a more stable signal. Enjoy a phenomenal increase in range, even in areas with high radio interference.

Programming Options

Programming options control your system's normal, operational set-up. Most options do not require additional parts, but some may require installation labor.

This system's programming options are listed below, with the factory default settings in **bold**:

- **Active arming** (only with the remote) or passive arming (automatic arming 30 seconds after the last vehicle door is closed).
- **Active door locking** (only when arming with the remote) or passive door locking (selectable only when Passive Arming has been programmed).
- Arming and disarming confirmation siren chirps can be programmed **on** or off.
- Ignition controlled door lock feature, **on** or off. With this feature on, the doors will lock three seconds after the ignition

key is turned on, and unlock when the ignition is turned off. The system also prevents the doors from locking when the ignition is turned on while any vehicle door is open.

Security & Convenience Expansions

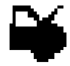
Listed below are some of the many expansion options available for use with your system. Please consult your dealer for a detailed explanation of all the available options.

Audio Sensor: Metal on glass, glass cracking, and breaking glass produce distinctive acoustic signatures. The 506T audio sensor uses a microphone to detect these sounds, and then analyzes them with proprietary acoustic software to determine if the glass has been tampered with or broken.

Backup Battery: The 520T Backup Battery ensures that the system stays armed, triggers the alarm and keeps the optional starter interrupt active if main battery power is disconnected.

Field Disturbance Sensor: An invisible dome of coverage is established by the 508D "radar" sensor. Your security system will respond to any intrusions into this field by initiating the triggered sequence.

Power Locks: This system offers lock outputs that can control some manufacturers' power door lock systems. For other systems, additional parts may be required.

Power Trunk Release: The  output of the system can operate a factory power release for the vehicle's trunk or hatch. An optional relay is required. If the factory release is not power-activated, then DEI's 522T trunk release solenoid can be added in most cases.

Power Window Control: Automatic power window control is provided with the 529T and 530T systems. These options operate power windows, by rolling them up, down, or both up and down. The 530T also offers one-touch switch operation.

Valet™ Start System: For the ultimate in convenience, the Valet Start System can start your vehicle, monitor engine functions and activate your climate control system with a push of a button! Over-rev protection, open-hood lockout, brake pedal shutoff and automatic timer shutoff are included. (This option is available only for fuel-injected, automatic-transmission vehicles.)

Installation Options

Installation options may require additional parts or labor. Please consult your dealer.

Interior Light Illumination: The interior domelight can be configured to illuminate for 30 seconds after the alarm is disarmed. If the system is rearmed during that 30-second period, the interior light illumination will terminate until the alarm is disarmed again. This option may require a relay to be added to some vehicles.

Glossary of Terms

Control Module: The "brain" of your security system. Usually hidden underneath the dash area of the vehicle. It houses the microprocessor that monitors your vehicle and controls all of the security system's functions.

Fault-Proof Starter Interrupt: Located on-board the control module, this is an automatic switch controlled by the security system that prevents the starter from cranking whenever the system is armed. The vehicle is never prevented from cranking when the system is disarmed, in Valet Mode, or if the starter interrupt fails.

Impact Sensor: A dual-stage shock sensor, located on-board the control module, that detects impacts to the vehicle.

Input: Any physical connection to the security system. An input can be provided through a sensor, pinswitch or by existing systems in the vehicle, such as ignition or courtesy lights.

LED: A red light mounted inside the vehicle, at a location determined by the installer. The LED indicates the status of your system and also reports triggers and faults in the system or sensors.

Siren: A noise generating device, usually installed in the engine compartment of the vehicle. The siren generates the chirps and tones heard when the system is triggered.

Remote: A hand-held, remote control that operates the various functions of the security system.

Trigger or Triggered Sequence: The "setting off" or "tripping" of the alarm. A triggered sequence consists of the siren sounding and the parking lights flashing for 30 seconds.

Valet Switch: A small, push-button switch mounted inside the vehicle, at a location determined by the installer. This switch is used to override the alarm when a remote is lost or damaged, or can be used to put the system into Valet Mode.

Warn-Away Response: Light impacts to the vehicle generate the warn-away response, which consists of several seconds of siren chirps and flashing parking lights.

Zone: A zone is a separate input that the alarm recognizes as unique. Each input to the system is connected to a particular zone. Two or more inputs may share the same zone.

QUICK REFERENCE GUIDE

Cut along dotted line and fold for a quick and easy reference to keep in your purse or wallet.

To arm using your remote:

- Press on your remote for one second. When the system arms, you will hear a short siren sound, or chirp, and see the parking lights flash once. If the vehicle's power door locks are controlled by the system, the doors will lock.

Disarming:

- Press again. You will hear two chirps, and the parking lights will flash twice. If the power door locks are controlled by the system, the doors will unlock.

Disarming without a remote:

- Turn on the ignition. Press the Valet switch within 15 seconds. The system should now disarm. If it does not disarm, you may have waited too long to press the Valet switch; turn the ignition off and on and try again.

Remote-controlled silent arm/disarm:

- Press briefly before arming or disarming, and the confirmation chirp(s) will be eliminated for that one operation only.

Panic Mode:

- Press for 1.5 seconds, and you will enter Panic Mode. The siren will sound and the parking lights will flash for 30 seconds. To stop Panic Mode at any time, press on the remote again.

To enter or exit Valet Mode with the Valet switch:

- Turn the ignition to the ON position, then turn to the OFF position. Press and release the Valet switch within 10 seconds.

Remote-controlled Valet:

- You can also enter or exit Valet Mode by using the remote. First, open any vehicle door. Then press . Press . Press again. The LED system status indicator will light solidly if you have entered Valet Mode and will turn off if you have exited Valet Mode.

The company behind this system is Directed Electronics

Since its inception, DEI® has had one purpose, to provide consumers with the finest vehicle security and car stereo products and accessories available. The recipient of nearly 100 patents and Innovations Awards in the field of advanced electronic technology, DEI is ISO 9001 registered.

Quality Directed Electronics products are sold and serviced throughout North America and around the world.

Call **(800) 274-0200** for more information about our products and services.

Directed Electronics is an ISO 9001 registered company.

DEI is committed to delivering world class quality products and services that excite and delight our customers.

driven to excel

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